

**Texas State University System**  
**Christmas Mountains Property**  
***Plans for Utilization***  
**July, 2011**

**Introduction.** Pursuant to Section 51.052(h) Texas Natural Resources Code, The School Land Board (SLB), for use and benefit of the Permanent School Fund (PSF), as Owner, is willing to transfer the interest of the Permanent School Fund to the Board of Regents of the Texas State University System (TSUS) and pursuant to authority granted in Texas Education Code Section 95.34, TSUS is willing to accept and assume the responsibility and obligation of stewardship over the Christmas Mountains Property, which is an approximately 9,000 acre parcel of land in West Texas.

**Prior Uses.** The General Land Office cautions that the original grantor, from whom the PSF acquired the property, wishes to maintain the property in as pristine a state as possible. A "conservation easement," a covenant running with the land, which TSUS agrees will be honored and adhered to by TSUS, specifying numerous restrictions on use, limits utility and value of the property to a significant extent, although, as stated below, numerous legitimate academic activities are possible on the site.

**Continuing Agreement for Use.** In addition to assuming the incidents of stewardship, provisions for non-intrusive use and enjoyment to Texans as well as all potential users of the Christmas Mountains Property by the public will include continuation of the GLO's working relationship with the National Park Service (NPS) and the Property Owners Association of Terlingua Ranch Inc. (POATRI) in the areas outlined in current agreements with those entities. Access may be coordinated through such entities.

In addition to assuming the incidents of stewardship, nothing in this agreement for utilization of the Christmas Mountains Property shall create, in any third party individual or third party group of individuals, an entitlement or legally enforceable right to compel access to or use of the Christmas Mountains Property.

In addition to assuming the incidents of stewardship, TSUS agrees to honor the General Land Office's provision of access to Texans for non-intrusive use and enjoyment of this rare state resource and to avail responsible university faculty and students with genuine academic interests carefully regulated access for study, research, and exploration.

**Hunting and Firearms.** Existing hunting leases shall be honored and access for legal hunting purposes maintained to include legal carrying of guns and ammunition in accordance with Texas law by authorized entrants on the Christmas Mountains Property. Such provisions for hunting, legal firearms and status of current leases may be coordinated through the admitting

entities Property Owners Association of Terlingua Ranch (POATRI) via the access through Terlingua Ranch and National Park Service (NPS) and across their adjoining boundaries.

**University Use Plan:** All of the public universities in the Texas State University System, and perhaps other academic institutions, will benefit from continued state of Texas stewardship of the Christmas Mountains Property. Listed below are the primary uses and benefits that the various schools would or could derive from having the ranch as a part of the Texas State University System.

***Sul Ross State University:*** Largely because of its proximity to Alpine, the site offers extraordinary research opportunities for Sul Ross State University faculty as field trip possibilities and summer field schools for both graduate and undergraduate students to conduct research in many academic areas including:

- Study of bear corridors.
- Study of species diversity in the Trans-Pecos region of Texas (which will build upon the academic legacy of Sul Ross Professor Barton Warnock).
- Assessment and management of Mule deer and Bighorn sheep populations as Sul Ross is already involved in Bighorn sheep restoration activity in the area.
- Examination of bird life for which the area offers great diversity.
- Exploration of volcanic history and activity (the property has known exposures of calderas with a laccolith intrusion).
- Augmentation of the University's existing studies in geochemistry, petrology, and mineralogy. The exposures of igneous rocks on this property include some of the oldest igneous rocks in the Big Bend region, from the Cenozoic Era, roughly 42 million years old. This is an area in which Professor Andy Cloud and his colleagues have recently made significant discoveries.
- Study of Economic Geology as the area has historically been mined for fluorspar, which is formed from the interaction of limestone with magma.
- Exploration of Structural Geology/Sedimentary Petrology.
- Study of Hydrology (numerous streams exist on the property that would be valuable in the study of rock/water interaction and the evolution of the water chemistry).
- Gathering of data and information in the field of Herpetology.



***Sul Ross Center for Big Bend Studies (CBBS)*** currently is conducting research on Paleo-Indian sites on a large, nearby, privately owned ranch that has already resulted in setting back the date of earliest known human activity in the region by over a thousand years. The Christmas Mountains site is especially attractive with the possibility of archeological sites on the property. Specifically, the *CBBS* would:

- Gather archeological data from the mountaintop for comparison with other nearby areas with similar configurations and elevations that have recently undergone archeological investigation by the *CBBS*. All such activity would be in strict conformity with both the highest principles and practices for conducting light level archeological studies and also the clear restrictions in the Conservation Fund's *Gift Deed* to the State of Texas and pertinent Texas Statutes.
- Complete archeological due diligence for documented sites if any.
- Gather archeological data from other settings on the property that will allow comparison with their findings in an adjacent portion of Big Bend National Park.

***Sam Houston State University:*** The Christmas Mountains would provide an excellent opportunity to conduct applied scholarship in many venues of practical interest and value to the people of the state of Texas and beyond with particular emphasis upon the following:

- The University *Center for Biological Field Studies*, which examines climate change and sustainability in a comparative natural environment, has the capability of establishing a model for long-term observational research because of the assurance that those sites will not be disturbed. This would give researchers a distinct advantage in attracting additional research funding to the state of Texas. (We note that University biologists have already developed a unique—3 patents granted, 3 pending—water purification system that has brought significant funding to the state as well as a public-private company that has attracted outside funding and promises to create jobs.)
- Texas does not have a long term ecological monitoring site, and the size of this property would allow for this possibility, particularly with the ability to pool the resources of all TSUS institutions.
- Professor Jerry Cook has been on the Dalquest Field Station board of directors, gaining expertise in the management and logistics of maintaining a research site in this region and perhaps some leverage in securing research funding.

- The Biology Department has a very strong interest in the study of diversity within the major groups of living organisms, and the pristine site in the Chihuahuan Desert ecosystem would provide significant opportunities for research in that area.
- SHSU currently offers a summer course in tropical ecology. (In 2010, the group went to an area around Puerto Vallarta, Mexico, and 2011 plans are for Costa Rica.) Acquisition of the Christmas Mountains Property would make it possible for faculty to make environmental ecology, including desert ecology, an area of excellence for students while providing them opportunity to engage in their studies without leaving the state.
- This area of Texas was a lush habitat and a refuge for many animals during the Pleistocene Ice Age, and at least one University researcher focuses on the animals and ecology of that epoch.
- The University has an expertise in field geology, and this site would offer opportunities in that field of study as well as the opportunity to collaborate with other TSUS faculty to enhance research and provide meaningful field experiences for students.

**Lamar University** has a long-standing interest in the Big Bend region. The following two departments would be particularly postured to make use of the Christmas Mountain Range:

- *Department of Biology:* Several faculty members, who focus on community ecology and population genetics, could test hypotheses on the ecosystem's vegetation, and wildlife. Dr. Michael Haiduk has taken student groups to Big Bend National Park for over two decades to study small mammal and reptile populations but, thus far, has been unable to make comparisons to those at higher elevations such as the Christmas Mountains. Dr. Randall Terry has an interest in juniper populations and other arid, regional plants. Both faculty members recognize the academic benefits of taking students to the mountains on extended field excursions. Other faculty members with expertise in ornithology, and microbial ecology likewise recognize the potential for research, especially in collaboration with biology faculty members at other TSUS schools.
- *Department of Earth and Space Sciences:* This program has a greater than fifty year history of conducting field camps and field research in West Texas. The Christmas Mountains would allow for an expansion of pedagogical experiences for faculty and students. The geologic setting is that of tertiary volcanic that terminated in a cluster of calderas which formed lakes that eventually



evaporated. This setting allows for a number of interests to be pursued including geophysical surveys, structural geology, and paleontology, including the following:

- Dr. Joe Kruger's research includes high resolution gravity measurements capable of showing density differences within the mountains' subsurface.
- Dr. Roger Cooper has assisted the United States Geological Survey in remapping Big Bend National Park and could provide considerable expertise in structural geology and rock studies of the mountains.
- Dr. Jim Westgate's research focuses on middle Eocene paleontology and the demise of North American primates at that time. Sedimentary deposits in the Christmas Mountains are middle-late Eocene and offer an opportunity for students to conduct paleontologic surveys of the area.

*Texas State University* areas of interest include:

- Biology: Wildlife Ecology, Earth and Ecosystems, Field Studies in Biology
- Geography: Environmental Geography, Physical Geography and Field Studies in Geography
- Anthropology: Texas archaeology, including the *Center for Archaeological Studies* and *Archaeology Field School*
- *Center for the Study of the Southwest*

**Conclusion:** Texas State University System institutions' stewardship of the Christmas Mountains Property would provide Texas faculty and students a rare opportunity to access and study a pristine and totally undeveloped large block of land in far west Texas for a wide range of research and field study activities. All of this activity could be accomplished through grant funding and/or with existing TSUS funds and resources as they become available, except that nothing herein shall commit TSUS to expenditure of any sum for the herein described purposes. Aside from the above-mentioned academic activities, it is highly probable that many more potential uses of the property will be discovered, all of which will inure ultimately to the benefit of the state of Texas, its students, and its citizens in accordance with Texas law.

Conservation Fund: TSUS and GLO understand that, per paragraph 17 of the Conservation Fund Gift Deed dated December 23, 1991, TSUS must submit this and future Use Plans directly to the Conservation Fund for approval. .

Effective the later date entered in the signatory section below.  
**TEXAS STATE UNIVERSITY SYSTEM**

BY \_\_\_\_\_  
Brian McCall Ph.D.  
Chancellor TSUS

Date: \_\_\_\_\_

**APPROVED AS TO FORM:**

\_\_\_\_\_  
Fernando C. Gomez  
Vice Chancellor and General Counsel

**STATE OF TEXAS FOR USE AND BENEFIT OF  
THE PERMANENT SCHOOL FUND**

BY: \_\_\_\_\_  
Jerry Patterson  
Commissioner Texas General Land Office  
Chairman School Land Board

Date: \_\_\_\_\_

**APPROVED:**

Content: \_\_\_\_\_  
Deputy: \_\_\_\_\_  
Legal: \_\_\_\_\_  
General Counsel: \_\_\_\_\_